

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An active dry sensor module comprising:
a hollow main body having an upper surface with an insertion hole formed through the upper surface;
a cap, interlocked with the insertion hole;
an active electrode inserted into the cap so that the active electrode is slidable relative to the cap, the active electrode having a contactable upper surface and a latching protrusion protruded from a lower part of the active electrode that is capable of being latched onto a lower end of the cap, wherein the active electrode having the contactable upper surface is slidable relative to the cap for directly contacting a portion of a scalp of a user that is using the active dry sensor module, and wherein the active electrode has a cap shape that is capable of contacting a skin surface of a user;
a resilient member with a first end contacting the lower part of the active electrode, installed in the main body, and electrically connected to the main body; and
an amplification circuit, installed in the main body and coupled to a second end of the resilient member, that is capable of receiving and processing a biomedical signal passed through the resilient member from the active electrode.
2. (Previously presented) The active dry sensor module as set forth in claim 1, further comprising a holder fixedly inserted into an insertion wherein the cap is inserted into the holder.
3. (Original) The active dry sensor module as set forth in claim 2 further comprising a headset inserted between the cap and the holder so that the main body is attached to and detached from the headset.
4. (Currently Amended) The active dry sensor module as set forth in claim 1, wherein the amplification circuit further comprises:

an instrumentation amplifier for amplifying the biomedical signal and adjusting a common mode rejection ratio and a pass band to generate an output signal, wherein the instrumentation amplifier includes three amplifiers that provide a differential amplifier and two amplifiers to form a feedback loop thereby having band pass characteristics and an amplification function;

a band-pass filter for filtering the output signal from the instrumentation amplifier; and

a notch filter for eliminating a noise component of 60 Hz contained in the output signal from the instrumentation amplifier.

5. (Original) The active dry sensor module as set forth in claim 1, wherein the active electrode and the spring are plated with gold or silver.
6. (Original) The active dry sensor module as set forth in claim 1, wherein the active electrode has a curved upper surface capable of contacting a skin surface.
7. (Original) The active dry sensor module as set forth in claim 1, wherein the active electrode has an uneven surface capable of contacting a skin surface.
8. (Original) The active dry sensor module of claim 1, wherein the resilient member further comprises a spring.
9. (Original) The active dry sensor module of claim 1, wherein the resilient member biases the active electrode against a surface of a user that is using the active dry sensor module.